

REMARKS

This is in response to the Office Action of September 20, 2007. Composition claims 1 and 4 are cancelled, without prejudice. Method claim 13 is amended to delete its reference to a solution. Also, linguistic amendments are made to method claim 13 to make it more idiomatic. Claims 2, 3, and 5-10 are amended to depend from claim 13. New claim 14 is added, based on disclosure in paragraphs [0037] to [0044] on pages 16-20 of the specification. New claim 15 is added, directed to the product of the process of claim 13. Claim 11 is amended to depend from claim 15. No new matter is introduced by this Amendment. Claims 2-3 and 5-15 are pending in the application.

The invention

The novel method of production provided by the present invention makes it possible to provide a rubber composition suitable for use in tire treads, which rubber composition has a highly balanced combination of beneficial properties, including fuel efficiency, wet grip performance, mechanical strength, wear resistance, and low temperature brittleness resistance.

The rejection

Claims 1-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over US 6,407,153 (von Hellens). Office Action, pages 2-6. The rejection does not apply to the claims in their current form.

Von Hellens discloses a vulcanizable rubber composition that is obtained by treating silica with a specific silicon compound to obtain a slurry of hydrophobicized silica, then mixing the slurry with SBR solution, subsequently removing solvent therefrom to obtain masterbatch, and adding thereto a solution BR masterbatch and vulcanizing agent, *etc.* However, there is no teaching or suggestion in the von Hellens disclosure – although an SBR solution is used therein – of the use of aqueous dispersion of SBR.

Moreover, the reference is entirely silent on the toluene insoluble components of its SBR/silica masterbatch. Applicants' claims all expressly require "a conjugated diene rubber -

silica mixture (A) containing at least 30 wt% of toluene insoluble components.” The Examiner has argued that persons of ordinary skill in the art would have found it obvious to “optimize” the amount of toluene insoluble components. There is nothing in the prior art of record, nor in the general experience of persons of ordinary skill in the art, that would lead one to consider the relative percentage of toluene insoluble components in a conjugated diene rubber-silica mixture as having any meaningful effect on the properties of silica-containing conjugated diene rubber compositions made therewith. The motivation alleged by the Examiner is “to ensure a good balance between the components of the mixture.” The vague language “good balance between components” has absolutely no meaning in a technological or commercial sense. Thus the Examiner has likewise failed to establish a *prima facie* case of obviousness for this feature of Applicants’ invention.

The presently claimed invention expressly requires at least two features that are neither taught nor suggested by the von Hellens disclosure – namely, “a conjugated diene rubber - silica mixture (A) containing at least 30 wt% of toluene insoluble components” and “co-coagulating an aqueous dispersion of the conjugated diene rubber.” Accordingly, it cannot realistically be said that the present invention is *prima facie* obvious from the von Hellens disclosure. Withdrawal of the rejection of record is in order and is earnestly solicited.

Contact information

Please contact Richard Gallagher (Registration No. 28,781) at (703) 205-8008 with any questions concerning this application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By 

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